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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,203	03/03/2006	Peter Renzel	BAW-0016	3717
23413	7590	09/05/2007		
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			EXAMINER KWOK, HELEN C	
			ART UNIT	PAPER NUMBER
			2856	
			MAIL DATE	DELIVERY MODE
			09/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/522,203

Applicant(s)

RENZEL, PETER

Examiner

Helen C. Kwok

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The abstract of the disclosure is objected to because it contains legal phraseology (i.e. "means). Correction is required. See MPEP § 608.01(b).

Information Disclosure Statement

3. The listing of references in the Search Report is not considered to be an information disclosure statement (IDS) complying with 37 CFR 1.98. 37 CFR 1.98(a)(2) requires a legible copy of: (1) each foreign patent; (2) each publication or that portion which caused it to be listed; (3) for each cited pending U.S. application, the application specification including claims, and any drawing of the application, or that portion of the application which caused it to be listed including any claims directed to that portion, unless the cited pending U.S. application is stored in the Image File Wrapper (IFW) system; and (4) all other information, or that portion which caused it to be listed. In addition, each IDS must include a list of all patents, publications, applications, or other information submitted for consideration by the Office (see 37 CFR 1.98(a)(1) and (b)), and MPEP § 609.04(a), subsection I. states, "the list ... must be submitted on a separate paper." Therefore, the references cited in the Search Report have not been

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considered. Applicant is advised that the date of submission of any item of information or any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the IDS, including all "statement" requirements of 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Objections

4. Claims 1-10 are objected to because of the following informalities. Appropriate correction is required.

In claim 1, line 20, the phrase "the shortest sound travel time" should be changed to – a shortest sound travel time --.

In claim 2, line 2, the phrase "the travel distance" should be changed to – a travel distance --. In line 3, the phrase "the travel distance" should be changed to – a travel distance --. In line 4, the phrase "the travel distance" should be changed to – a travel distance --.

In claim 5, line 12, the phrase "the receive signal" should be changed to – a receive signal --.

In claim 6, line 2, the phrase "the travel distance" should be changed to – a travel distance --. In line 3, the phrase "the travel distance" should be changed to – a travel distance --. In line 4, the phrase "the travel distance" should be changed to – a travel distance --.

In claim 8, line 12, the word – said – should be inserted before the word "receiving".

In claim 9, line 4, the phrase "the shortest" should be changed to – a shortest --.

In line 6, the phrase "the very path" should be changed to – a path --.

In claim 10, line 2, the word – the – should be inserted before the word "receiving".

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, 4 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by either U.S. Patent 4,088,028 (Hildebrandt) or U.S. Patent 4,182,155 (Fowler) or JP 5-288728 (Furumura et al.).

The references, Hildebrandt, Fowler and Furumura et al., disclose a base material (3;14;1); a probe (1;10;P) including a transmitting transducer (9;22;5a) and a receiver transducer (8;26;5b); a precursor body (5,6;24,28;11) having a coupling surface couplable to the base material and carrying the transmitting and receiver transducers and having a sound velocity C_v wherein the transmitting and receiver transducers oriented to be inclined towards each other and being spaced apart at a center to center distance K and a center to center distance D_v from the coupling surface (as observed in the figures of each reference) such that an ultrasonic pulse is generated

by the transmitting transducer passes through the precursor body into the base material; a creeping wave is produced in the base material where a portion of the creeping wave reaches the receiver transducer via the precursor body; a shortest sound travel time T_{tot} and a sound velocity C_b in the base material is measured. (See, Figures 1-5, column 3, line 47 to column 7, line 35 of Hildebrandt; Figures 1-3, column 2, line 65 to column 5, line 45 of Fowler; Figures 1-7, Abstract of Furumura et al.).

With regards to claims 2, 4 and 7, the references further disclose summing the distances traveled and beams from the transmitting and receiving transducers lie in the same plane and are inclined at the same angle relative to the coupling surface.

With regards to claims 8-10, the claims are commensurate in scope with claims 1-2,4,7 and are rejected for the same reasons as set forth above.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over either U.S. Patent 4,088,028 (Hildebrandt) or U.S. Patent 4,182,155 (Fowler) or JP 5-288728 (Furumura et al.) in view of either U.S. Patent 6,070,466 (Taran et al.) or U.S. Patent 6,035,717 (Carodiskey).

With regards to claims 3 and 6, the references do not specify such parameters (i.e. equations) as in the claims. However, to have develop and derive such equations as in these claims is considered to be a matter of manipulating the parameters to derive the equations due to experimentation to an artisan of ordinary skill in the art at the time of invention.

With regards to claim 5, the references, Hildebrandt, Fowler and Furumura et al. do not disclose the claimed feature as in this claim. The references, Taran et al. and Carodiskey, teach a coating material applied to a base material and determining the sound velocity of the coating material. (See, Figures 1-9, column 3, line 4 to column 4, line 65 of Taran et al.; Figures 1-4, column 2, line 51 to column 4, line 47 of Carodiskey). It would have been obvious to a person of ordinary skills in the art at the time of invention to have readily recognize the advantages and desirability of employing the coating material to the base material as suggested by Taran et al. and Carodiskey to the apparatus of either Hildebrandt, Fowler or Furumura et al. to provide quality control of the bonding of the coating material and the base material and the thickness of the materials to form a strong atomic bonding at the interface layer.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

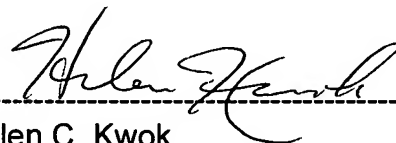
The references cited are related to ultrasonic inspection measuring the travel time of an ultrasonic wave.

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Helen C. Kwok
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hck
August 27, 2007